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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/661,706

09/12/2003

Thomas O. Holtey

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EXAMINER

JOO, JOSHUA

ART UNIT

PAPER NUMBER

2454

NOTIFICATION DATE

DELIVERY MODE

06/24/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/661,706	Applicant(s) HOLTEY, THOMAS O.	
	Examiner JOSHUA JOO	Art Unit 2454	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 April 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Detailed Action

This Office action is in response to Applicant's communication filed on 04/07/2009.

Claims 1-16 are pending for examination.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/07/2009 has been entered.

Response to Arguments

Applicant's arguments with respect to claims 1-16 have been considered but are moot in view of the new ground(s) of rejection. New ground(s) of rejection are necessitated by Applicant's amendment.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 8-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- i) Regarding claims 8 and 12, it is unclear as to which feature "it" is specifically referring to in the claims. It is also unclear as to which ripeness indicator "that ripeness indicator" is referring to in the claims.
- ii) Regarding claim 9, it is unclear as to which ripeness indicators "those ripeness indicators" are being referred to in the claim.

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- iii) Regarding claim 15, the term “meaningful” renders the claim as indefinite because it is unclear as to what type of statistics must be generated to be considered as “meaningful”.
- iv) Regarding claim 16, it is unclear if “the ripeness indicator” is intended to refer to “the first ripeness indicator” or another ripeness indicator.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 12-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Wilford et al. US Patent #6,968,392 (Wilford hereinafter).

As per claim 12, Wilford teaches the invention as claimed including a network device comprising:

a forwarding engine configured to process data traffic received by the network device (col. 2, lines 64-68. Network device such as a switch or router. col. 3, line 38-51; col. 4, lines 30-46. Module for processing traffic.);

a plurality of counters configured to monitor aspects of data traffic received by the network device (col. 4 lines 30-34. Plurality of adders for counting stats.);

a plurality of ripeness indicators, each of the ripeness of the indicators being associated with one or more of the counters, each of the ripeness indicators being indicative of a fullness level of the one or more counters with which it is associated and indicating that the fullness level of the one or more counters

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has exceeded a particular level (col. 7, lines 32-40. Buffer entry indicates stat is greater than a threshold.

Col. 7, lines 60-64. Send signal indicating value of adder is greater than a threshold.); and

control logic configured to harvest information from the one or more counters associated with a ripeness indicator once that ripeness indicator has been set (col. 8, lines 1-5. Collect statistical information by reading stats.);

wherein the forwarding engine maintains the counters (col. 4, lines 28-40. Stat architecture includes adders.).

As per claim 13, Wilford teaches the network device of claim 8 wherein the control logic is part of the forwarding engine (col. 8, lines 1-5. Collect statistical information by reading stats.).

As per claim 14, Wilford teaches the network device of claim 8, further comprising a switch fabric connected to the forwarding engine (col. 3, lines 1-11. Switch.).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-9, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilford, in view of Dugatkin et al. US Publication #2004/0236866 (Dugatkin hereinafter).

As per claim 1, Wilford teaches substantially the invention as claimed including a method for selectively reading counter information in a network device, the method comprising the steps of:

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setting a first ripeness indicator associated with a value of a first counter, the first counter containing information associated with a statistic of traffic being handled by the network device (col. 4 lines 30-34. Adder for counting stats.), the first ripeness indicator indicating that a value of the first counter has reached a particular value (col. 7, lines 32-40. Buffer entry indicates stat is greater than a threshold. col. 7, lines 60-64. Send signal indicating value of adder is greater than a threshold.);

reading the first counter to determine the value of the first counter after the first ripeness indicator has been set and in response to the setting of the first ripeness indicator (col. 8, lines 1-5. Collect statistical information by reading stats.).

Wilford teaches of reading the first counter after the first ripeness indicator has been set. However, Wilford does not specifically teach reading only after the first ripeness indicator has been set.

Dugatkin teaches of collecting data only after an indicator has been set (Paragraph 0059).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to read the first counter only after an indicator has been set. The motivation for the suggested combination is that Dugatkin's teachings would improve Wildford's teachings by enabling collection of data according to user-defined operational parameters (Paragraph 0050) and enabling automatic analysis and statistics gathering of network traffic (Paragraph 0025).

As per claim 8, Wilford teaches substantially the invention as claimed including a network device comprising:

a forwarding engine configured to process data traffic received by the network device (col. 2, lines 64-68. Network device such as a switch or router. col. 3, line 38-51; col. 4, lines 30-46. Module for processing traffic.);

a plurality of counters configured to monitor aspects of data traffic received by the network device (col. 4 lines 30-34. Plurality of adders for counting stats.);

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a plurality of ripeness indicators, each of the ripeness of the indicators being associated with one or more of the counters, each of the ripeness indicators being indicative of a fullness level of the one or more counters with which it is associated and indicating that the fullness level of the one or more counters has exceeded a particular level (col. 7, lines 32-40. Buffer entry indicates stat is greater than a threshold. Col. 7, lines 60-64. Send signal indicating value of adder is greater than a threshold.); and

control logic configured to harvest information from the one or more counters associated with a ripeness indicator after ripeness indicator has been set (col. 8, lines 1-5. Collect statistical information by reading stats.).

Wilford teaches of harvesting information after the first ripeness indicator has been set. However, Wilford does not specifically teach harvesting only after the first ripeness indicator has been set.

Dugatkin teaches of collecting data only after an indicator has been set (Paragraph 0059).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to read the first counter only after an indicator has been set. The motivation for the suggested combination is that Dugatkin's teachings would improve Wildford's teachings by enabling collection of data according to user-defined operational parameters (Paragraph 0050) and enabling automatic analysis and statistics gathering of network traffic (Paragraph 0025).

As per claim 3, Wilford teaches the method of claim 1 further comprising reading at least a second counter in response to setting of the first ripeness indicator (col. 7 lines 28-32. Collect stats if corresponding stats are greater or equal to a threshold).

As per claim 4, Wilford teaches the method of claim 1 further comprising setting the first ripeness indicator when a second counter reaches a particular value (col. 5, lines 61-67. More than one adder for

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type of cell information and LCI. col. 7, lines 28-32, 60-67. Set LCI in entry and in response, collect stats relating to the LCI.).

As per claim 5, Wilford does not specifically teach the method of claim 1, further comprising dynamically adjusting the particular value.

Dugatkin teaches of determining whether a counter has reached a particular value, wherein the particular value may be dynamically adjusted (Paragraphs 0050; 0059).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the particular value to be dynamically adjusted. The motivation for the suggested combination is that Dugatkin's teachings would improve Wildford's teachings by enabling collection of data according to user-defined operational parameters (Paragraph 0050) and enabling automatic analysis and statistics gathering of network traffic (Paragraph 0025).

As per claim 6, Wilford teaches the method of claim 1 wherein the counter is configured to measure at least one aspect of data traffic received by the network device from a communications network (col. 3, line 610-col. 4, line 20. Measure cells per connection, cells with priority bit, dropped cells, etc... col. 4, lines 33-35. Count stats for traffic types.).

As per claim 7, Wilford teaches the method of claim 1 further comprising counting, by the network device, data traffic received by the network device, and utilizing the first counter to record at least one aspect of the data traffic received by the network device (col. 4, lines 14-19. Count the number of cells being communicated.).

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As per claim 9, Wilford teaches the network device of claim 8, wherein the control logic is configured to read the ripeness indicators, ascertain which counters are ripe for harvesting, and cause the counters associate with those ripeness indicators to be harvested (col. 8, lines 24-59. Read entry from buffer and retrieve stats related to LCI.).

As per claim 15, Wilford does not specifically teach the network device of claim 8 further comprising a statistics coprocessor configured to interface with said counters and said control logic to enable meaningful statistics to be generated from values harvested from said counters.

Dugatkin teaches of a statistics coprocessor configured to interface with counters and a control logic to enable meaningful statistics to be generated from values harvested from said counters (Paragraph 0067; 0072-0073).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to implement a statistics coprocessor configured to interface with said counters and said control logic to enable meaningful statistics to be generated from values harvested from said counters. The motivation for the suggested combination is that Dugatkin's teachings would improve Wilford's teachings by providing automatic traffic analysis and enabling generation of user readable reports.

As per claim 16, Wilford teaches the method of claim 4, further comprising reading at least the second counter in response to setting of the ripeness indicator (col. 5, lines 61-67. More than one adder for type of cell information and LCI. col. 7, lines 28-32, 60-67. Set LCI in entry and in response collect stats relating to the LCI.).

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Claims 2, 10, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilford, in view of Donati et al. US Patent #7,007,099 (Donati hereinafter).

As per claim 2, Wilford does not specifically teach the method of claim 1, further comprising resetting the first ripeness indicator to a default value.

Donati teaches of resetting indicators to a default value (col. 46, line 64-col. 47, line 21).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to reset an indicator to a default value, which would prevent incorrect indications of counters when counters have not reached a particular value.

As per claim 10, Wilford does not specifically teach the network device of claim 8, wherein the ripeness indicators comprise an array of bits, each bit representing at least one of said counters.

Donati teaches of indicators comprising an array of bits, each bit representing at least one counter (col. 63, lines 54-67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the ripeness indicators as taught by Wilford to comprise an array of bits, each bit representing at least one of said counters. The motivation for the suggested combination is that Donati's teachings of using bits as representative objects would reduce memory usage since a bit represents the smallest unit of data.

As per claim 11, Wilford does not specifically teach the network device of claim 8, wherein the ripeness indicators comprise an array of bits, and wherein subsets of said bits represents at least one of said counters.

Donati teaches of indicators comprising an array of bits, wherein a subset of said bits represent at least one counter (col. 63, lines 43-67).

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the ripeness indicators as taught by Wilford to comprise an array of bits, wherein subsets of said bits represents at least one of said counters. The motivation for the suggested combination is that Donati's teachings of using bits as representative objects would reduce memory usage since a bit represents the smallest unit of data.

Conclusion

A shortened statutory period for reply to this Office action is set to expire THREE MONTHS from the mailing date of this action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua Joo whose telephone number is 571 272-3966. The examiner can normally be reached on Monday to Thursday 8AM to 5PM and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J. Flynn can be reached on 571 272-1915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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/J. J./

Examiner, Art Unit 2454

/Nathan J. Flynn/

Supervisory Patent Examiner, Art Unit 2454